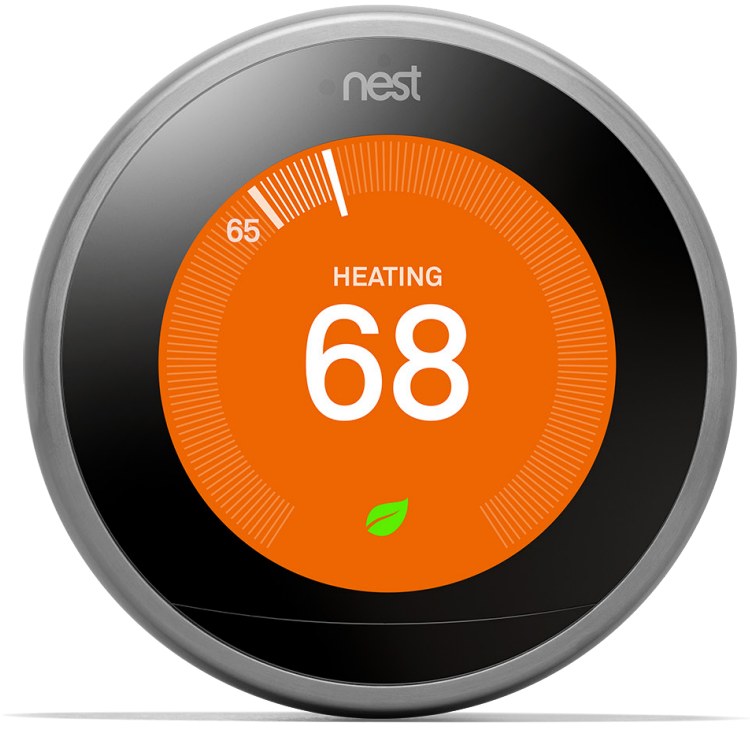
Google Nest Learning Thermostat
Product environmental report



Environmental Sustainability at Google

At Google, operating in an environmentally sustainable way has been a core value from the beginning. As our business has evolved to include the manufacturing of electronic products, we've continually expanded our efforts to improve each product's environmental performance and minimize Google's impact on the world around us. This report details the environmental performance of Google Nest Learning Thermostat over its full life cycle, from design and manufacturing through usage and recycling.

Product highlights

The Nest Learning Thermostat is designed with the following key features to help reduce its environmental impact:

- 96% paper and fiber-based packaging
- PVC-free

ENERGY STAR for Connected Thermostats 1.0[1]

Greenhouse gas (GHG) emissions

The production, transportation, use, and recycling of electronic products generate GHG emissions that can contribute to rising global temperatures. Google conducts a life cycle assessment on products to identify materials and processes that contribute to GHG emissions, with the goal of minimizing these emissions.

Estimated GHG Emissions for Nest Learning Thermostat[2]

Total GHG emissions over ten-year life cycle:
30 kg CO_2e

Energy efficiency of Nest Learning Thermostat

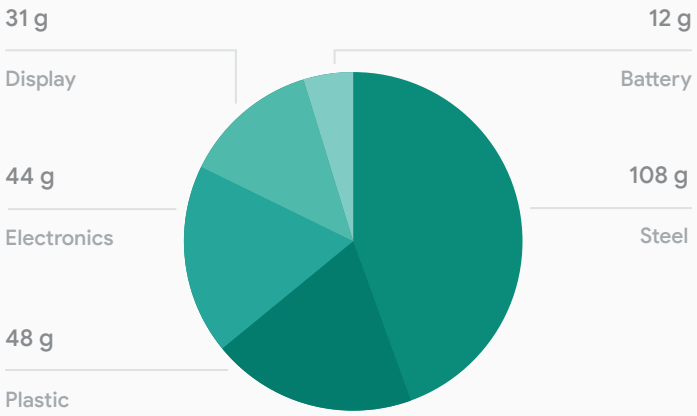
Mode	115 V, 60 Hz
Annual energy use estimate[3]	1 kWh/y
Annual cost of energy estimate	US$0.13[4]

Material use

Nest Learning Thermostat is designed to be small. Minimizing the size and weight of the Nest Learning Thermostat allows materials to be used more efficiently, thereby reducing the energy consumed during production and shipping as well as minimizing the amount of packaging.

Materials used in Nest Learning Thermostat

Total materials: 243 g[5]



Voluntary substance restrictions

Nest Learning Thermostat meets the following voluntary substance restrictions:

- PVC-free

Battery

- Built-in rechargeable lithium-ion battery

Packaging

Packaging for Nest Learning Thermostat uses 96% paper and fiber-based materials. We have designed the Nest Learning Thermostat packaging to minimize its weight and volume, which helps conserve natural resources and allows more devices to be transported in a single shipping container.

Packaging materials for Nest Learning Thermostat

Configuration	Total weight
U.S. retail	384 g

Ethical sourcing

Google and its subsidiaries are committed to ensuring that working conditions in our operations and in our supply chains are safe, that all workers are treated with respect and dignity, and that business operations are environmentally responsible and ethically conducted. Learn more about our expectations for manufacturing partners in the Google Supplier Code of Conduct, our 2018 Responsible Supply Chain Report, and our Conflict Minerals Policy.

Learn more

For more information about our environmental sustainability initiatives—including case studies, white papers, and blogs—please see our Sustainability website and our 2018 Environmental Report.

Learn how to recycle your used device in the Google Store Help section of our website.

Endnotes

1. This product is ENERGY STAR certified in the United States and Canada. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency.
2. GHG emissions estimates are calculated in accordance with ISO 14040 and ISO 14044 requirements and guidelines for conducting life cycle assessments, and include the production, transportation, use, and recycling of the product, accessories, and packaging.
3. Estimated energy use is based on 24 hours operation per day.
4. The average residential cost of energy for U.S. households is $0.13 per kWh (source: U.S. Energy Information Agency Feb 2019 report).
5. Product material weights are for Nest Learning Thermostat only. For the U.S. configuration, an additional 135 g of electronic accessories can be included in-box.